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IS : 7731 - 1975

Indian Standard
GUIDE FOR STORAGE OF PEACHES

UDC 634.25 : 664.8.037.53



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INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110001

Price Rs 5.00

Gr 2

September 1975

Indian Standard

GUIDE FOR STORAGE OF PEACHES

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Indian Standard

GUIDE FOR STORAGE OF PEACHES

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 31 July 1975, after the draft finalized by the Fruits and Vegetables Sectional Committee had been approved by the Agricultural and Food Products Division Council.

0.2 To ensure fuller utilization of perishable foodstuffs, such as fruits and vegetables, it is necessary that they should be preserved under conditions so as to maintain their fitness for human consumption over a period of time. Refrigeration is one of the important means to preserve these foodstuffs. For cold storage of various fruits and vegetables on scientific lines a series of Indian Standard guides based on corresponding ISO Recommendations are being issued. It is hoped that these guides stipulating the conditions to be maintained for different fruits and vegetables would prove to be helpful in better administration of cold storages and in preventing avoidable wastage of fruits.

0.3 In the preparation of this standard, considerable assistance has been drawn from ISO/R 873-1968 'Guide for cold storage of peaches' issued by the International Organization for Standardization.

0.4 This Institution had earlier issued IS : 7252-1974* which prescribes definitions and information concerning measurement of physical factors in cold stores.

1. SCOPE

1.1 This standard describes methods for obtaining conditions for the successful cold storage of peaches.

2. CONDITIONS OF HARVESTING AND PUTTING INTO STORAGE

2.1 Harvesting

2.1.1 It may be difficult to characterize the correct maturity for harvesting. The most frequently used practical criteria for determining the best time for harvesting should be:

- a) the basic ground colour of the outer skin;

Note — The basic ground colour should be distinguished from the anthocyanin red pigmentation, the intensity and extent of which vary according to the variety and, to a certain extent, with the exposure to sunlight.

*Guide for testing of physical conditions in cold stores.

- b) the hardness of the flesh, estimated by means of a spring penetrometer; and
- c) the age of the fruit from flowering.

2.1.1.1 Criteria mentioned below for determining the harvesting maturity of varieties July Elberta, Elberta and J. H. Hale have been found useful for canning:

- a) The fuzz (silky lustrous hairy surface) of the fruit turns dull and can be rubbed off with gentle hand when the fruit approaches canning maturity which otherwise in under-ripe fruit cannot be removed.
- b) On cutting the fruit along suture one half gets easily separated while stone which remains intact in the other half shows resistance in taking it out. However, it can be separated without cracking the pit with the help of edge of the knife.
- c) Fruit remains firm when pressed in the fist and cut halves do not allow juice to ooze out.
- d) Colour of flesh turns straw-yellow from creamish-white which changes to golden-yellow in fully mature fruits. The straw-yellow colour stage is the proper stage of maturity for picking for canning.

2.1.2 These criteria may not be universally valid, for a given variety may vary from one region to another. The grower may decide on his own criteria for picking, on the basis of experience.

2.1.3 The basic ground colour and the recommended hardness may vary according to the variety. In general it may be advisable to pick the fruit at the time when their colour varies between green and yellow.

2.1.4 At the time of picking, the flesh should be firm with a slight aroma and slightly acidic.

2.2 Quality Characteristics for Storage

2.2.1 Fruit put into cold storage should be sound, free from bruises or physiological disorders and free from any visible sign of fungal or bacterial attack. It should be clean and dry.

2.3 Various Treatments

2.3.1 For most varieties the fruit should be rapidly cooled after harvesting. Certain varieties, for example, Elberta and Red Haven, are sensitive to this treatment, and show a tendency to cotton-wool texture. Treatment with iced water, to which sodium hypochlorite (*Min* 150 mg/kg) has been added, has sometimes been recommended, as also the treatment with wax.

2.3.1.1 For varieties which are susceptible to brown rot or rhizopus rot, hot water dipping at 55°C for three minutes be given.

2.4 Putting into Storage

2.4.1 The fruit should be put into the cold store as soon as possible after harvesting.

3. OPTIMAL CONDITIONS OF STORAGE

3.1 Temperature

3.1.1 Temperature of 1 to 2°C, subject to exception, has been recommended.

3.1.2 The recommended temperature for a varieties are given in Table 1.

TABLE 1 RECOMMENDED TEMPERATURES

SL. No.	VARIETY	RECOMMENDED TEMPERATURE	EXPECTED STORAGE LIFE	GENERAL REMARKS
(1)	(2)	(3)	(4)	(5)
		°C	Weeks	
i)	Red Haven	0 to 2	2 to 4	—
ii)	Elberta	-1 to 0	2 to 4	Require 3 days of complementary ripening. Tendency to cotton-wool texture. 24 hours in 1 percent of acetylene at 24°C, then 12 hours in air at 24°C, counters cotton-wool texture. A period of 2 to 5 days at 24°C before putting into cold storage enables the storage life to be extended by 1 week
iii)	J. H. Hale	-1 to 0	4 to 6	

3.2 Relative Humidity

3.2.1 The optimal relative humidity for the storage of peaches is 90 percent.

3.3 Storage Life

3.3.1 According to the variety, keeping for 2 to 6 weeks at 0°C may be expected. The expected storage life for a few varieties is given in Table 1.

3.3.2 Storage should not be prolonged beyond limits compatible with the maintenance of good quality.

3.3.3 Samples of fruit should be drawn in such a way as to detect the appearance of any wastage.

3.4 Operations at the End of Cold Storage — In certain cases complementary ripening may be needed at the end of the period in the cold store. Good results have been obtained with ripening temperatures of 18 to 20°C. If the storage in the cold has been too prolonged, the fruit is often no longer capable of ripening normally.

INDIAN STANDARDS

ON

FRUITS AND VEGETABLES

IS :

2860-1964	Methods of sampling and test for processed fruits and vegetables
2867-1964	Canned mangoes
2868-1964	Canned pineapples
2869-1964	Canned orange segments
3197-1965	Onions
3240-1965	Garlic
3248-1965	Canned tomatoes
3500-1966	Mango chutney
3501-1966	Pickles
3543-1966	Papain
3547-1966	Mango nectar
3718-1966	Limes, fresh
3801-1966	Guavas
3880-1966	Canned mango pulp
3881-1966	Tomato juice
3882-1966	Tomato ketchup
3883-1966	Canned tomato puree
3884-1966	Canned tomato paste
4235-1967	Chillies, fresh
4243-1967	Mandarins
4624-1968	Dehydrated peas
4625-1968	Dehydrated carrots
4626-1968	Dehydrated potatoes
4627-1968	Dehydrated cabbage
4628-1968	Dehydrated okra (<i>BHINDI</i>)
4935-1968	Synthetic syrups
4936-1968	Fruit squashes
4939-1968	Methods of test for products derived from fruits and vegetables
5781-1970	Method for determination of total solids in fruits and vegetable products
5800-1970	Orange juice
5861-1970	Fruit jams, jellies and marmalades
6028-1971	Guide for storage and transport of green bananas
6669-1972	Guide for storage of apples
6670-1972	Guide for storage of potatoes
7191-1974	Guide for storage of tomatoes
7192-1974	Guide for storage of citrus fruits
7252-1974	Testing of physical conditions in cold stores
7254 (Part I) - 1974	Methods of test for determining preservatives in fruit and vegetable products: Part I Benzoic acid
7470-1974	Nomenclature of vegetables
7730-1975	Guide for storage of pears

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